

AP20 Rec'd PTO 21 APR 2006

## SEQUENCE LISTING

FIG. 1

<210> 1 SEQ ID NO: 1  
<211> 4696  
<212> DNA  
<213> Homo sapiens

&lt;400&gt; 1

aaaaccacca	gggttggtgc	tggaaagttt	ttattcctgg	attaaaggca	aggatcagcc	60
tgtatttttag	caatttcttt	ttaaggttaa	tgtcccatgc	gccacctact	tctggggccc	120
tggtccagcc	cttctttatg	tggtgaccac	ttctagggtc	agcacttccc	aactctgctg	180
cgcagtgga	tcaatcccct	gggaagtcc	ttaaaaatgc	ccaagtccagc	ccccgcctac	240
ccccaaagat	gcatggacca	gaaatctctg	aaaggtggcc	tgagtattac	tattttctaa	300
aaggctctct	cagaccattt	taatgggcac	ccagtgttga	aaataactgc	tccagtttgt	360
taaaaataa	ttggtgtgaa	tattggcaaa	agccctctgg	cacaaagaaa	gagaaccagt	420
ttcttctagc	taatgtttgt	tagccagaat	tatctgtggc	atagtccatg	tgacttaata	480
gacctggtct	tccagggcag	ctgaatgcaa	atgtttctca	cgtgtagaac	gggatgtcag	540
ggcttacaga	gaaagtggga	aactggaatg	atgactccat	ctaattcggc	catgctggat	600
gattcacctg	gattctctca	tgtcctgagc	attgaaaaca	taatgaagag	tttttaaatt	660
gaatgtttaa	aagagtga	acaactccat	ccctttttct	gtttcctttt	accttgtatt	720
tatgtaccac	caggtaccct	gctcttggca	gtgagcgtga	atgaatggca	cagctcagcc	780
cctgaagcct	gtgtgcagag	attgagggat	tgtgatggag	tagttcattc	atgctcatgt	840
taaggggggt	gctaatagca	gactagtgt	cctgcgatta	ttaatatcta	ggtctgggac	900
agatttgtat	ggcttctttt	ccagttgcca	cctcagcaga	aaaggaaata	gaaaacccta	960
acttgtaaag	ttagacaatt	agactgtaaa	gtttgtatat	gtgacaactt	cagatacaaa	1020
gacacacact	tacccttgac	ggggcttaag	aggagagtgt	caaacataat	accaaagtga	1080
aagaagatag	ctcttcatct	acaaattatt	tttaaacaca	tttaccaggt	taaacaataa	1140
ctaatttttc	ggaagagaag	agtaccca	gtcaaagtcc	ctaagacgaa	gagatgctta	1200
tggcattttt	ttttaataa	agaaaatgca	aagttagagt	ggttctgaag	gaacctagga	1260
tgaataaggt	acagacatga	ttattcta	ggtgcagaca	ggattgagag	agaagggggg	1320
aggggagaga	tggagaaagg	catggatgga	agatgacgtt	tggatccaga	tttgggaaag	1380
gagagtaaag	gaaggaggta	agcagagatt	tattttttta	attttattaa	tgtgttttcc	1440
cctctttttc	ttgttatttt	tctcatctgt	ctgttcatac	ttggatattt	tgtccaataa	1500
actatcttct	aaggactctg	aaaatgcact	gaataatttt	ggagggttta	ctgggggtgcc	1560
agacgccact	ttaggagttt	tacatatcct	ctccatttca	tttagttctc	ttagcacaga	1620
gaagtgggag	aagatagtc	cattttacag	gtgggatgaa	gagagagatg	gaggaatttg	1680
ccccagggtta	ctcagctaga	aggtggtgaa	gaactcaagc	cttcggatat	cagcgctgg	1740
catttaacta	ccaatcggtc	ctgctgggac	tccggctcct	ctggcaccat	ccccgggacc	1800
tactcagaga	gtttgcacgt	ggccggctgc	gttccatcgt	ctaacaaggt	ccagcacagc	1860
gcaaatccga	agatcgtcta	ccccggggaa	aaagagagtc	tgtttaattc	tctgtggcc	1920
ctccaagtga	gttcttttgg	gttccattgc	ctagacgagg	aaagtgaggc	tttgccctgct	1980
ctgcgctcac	agggtcggca	agtagtggga	ccctaggttc	ctgcagtatt	ccagagataa	2040

```

tcaaagctgc acaggctctcg tcattttttat gcaaaggcgt ccggaaggct cgaactctcc 2100
cttgacacaag cccatctgtc tctgtgcgcc gcccccgga cacggaagca ggcggcgagc 2160
agcgccgaggt ggggtggagaa ccgtcccccg ccactcacc ctcggccaac tctccgcgcc 2220
ttctcagccg gcacccacga ggccgacctc tctcggccta aaaaaaaaaa aaaaaaatcc 2280
cgccctcccc tgcaccccg cgcgcgcccc caggagctg cattaatatt aatctcgtg 2340
aataattgaa ggcagagat ttattcgagc ttcggcgggg gagggagcgc agctggggcg 2400
cgtttaggct gcaccacccg cgtgtttcag ccgctcgact ccgctggacc tgggaccccc 2460
agacgtggga ggatgggggt ggtgtgcctg cctgtgagtt tgggggtgag tgtgagctga 2520
agcgggtgct ccggggagtg aggggggagc gccaggggct gctccaggga ggcggagacg 2580
gaggggcatc ccgggtctcc gcgcggctgc ctgcgcttca cccgcacgg ggtgacctgg 2640
ggccacgcgg gcttcagggg aaacaatagc tactccttag atcctgggct cctgccaccg 2700
gctgccccag cctccccga cgagcggcgg ggcctctttt ctattttggc taatttatgg 2760
cgagaggctg ggggaaggga tggcagagga gggaccgca ctgaaaatgg gggcgggggg 2820
cggcgggttaa aggagttgcc cgagggcgcg gcgcgggtga tgtcagctct cgacgaaaat 2880
agagagggat cgctgcaaa tccccagctc cggcggggct aaaccttgca atccctccct 2940
ggcgggcgcc gagccagagc gcagcggcct ccaccgcctc ccaggcgcg caccaccccc 3000
cacacgcgca cgcacgctca ccgtcctctg ccaccactct ctgctccgc cactcgccgc 3060
gcccgcgagc ccgcagcaa agcacagggt gcagcggctg caggggcgca tcgcccgcgt 3120
gcgcctcctc cctgccctgg gcgcctcgt ctctcgggga agccaccctc ggagcccccg 3180
gagctccccg ccaagcgcca tccccgcggg cggaggggag cgcgggtcgc gcgccgtgga 3240
gagcggggac gcggtatagc gcccgagga gcctcctgcg cccgttgagg cgctaaaggg 3300
cttacccegg aggcgggtgg aaggcgggc agaggctcct cttaaatacc gctcccggcc 3360
gcacttcgcg ctacccccg cgctccgctt ctccctcgcc cacagctgcc ggatagtgtc 3420
gaagaggagg gggcggtccc cagaccatgg catctacgga aggtgaggg gatttttatc 3480
tgtacccgcg ggaagcggg gtcacgcgcg ggggtggtgg gccctatcc gggatgcgga 3540
tagagaggcg gcgcggcggg gcctcgagg tgggtggcga gccgtagctt ggctggggat 3600
gggatgggtg ggaggggatt gatcttcttt cctggagatt gctgcttaat cctttgaaa 3660
tgcgagaggt ggaggggtgt tttattttga taaaagggt aaggtgcgct gggggcctga 3720
gagtgtagag aagaaatcct cttgaggtta cttttgggat ttcaaaacaa taggggattg 3780
ggcatagtgt gagcagacac cggggtagca gcgcctggag cgcggcgccc caggcccag 3840
gcgggcttgc aggtggtgac ggctcggaag gaatgagcca agacagggcc ctggggcggg 3900
gcaaggacca gcgcgcgcgg ccttgaacgc caggtttgca ggtcgccat ggagatgctg 3960
ggcccgctcc gatcggtcct tgtccctgga aggcggaatc tccctggcta gctctaagg 4020
aggggtggaag agatttggtg gcttcccggg aggcgggaaa acgtgtggtt tgggacaagg 4080
gcaaggatcg ccagactcca gcgggcaggg atagcattgg ctcccctatt cagcccagag 4140
atctggagtc gtgtcctgcc tcccaagatt ccagctggca tggggaaaagc tccctcgeag 4200
tgataactaa agacaattgt ctttagcaag agacagaagg ggctgcaggg ggcaaaagga 4260
ttctttgaat actcacacat caaaggaaa gtcacagag tccttggacc agtatctccc 4320
agaaaacttt ttgggcttcg tagaacctga gtggcaatga aaagactggg cagctcagcc 4380
ctttggttaa ttcccaaat tgcagttact cacttgcaag cgatcacaaa atccatgta 4440
tgtgaaaagc aaatatcagg ggcttctctg ggctcaagtg gtggtgttg cattttccag 4500
tttctcctaa gaaattttac caactccgca ggcttgtttt aggggaatgg atctctaaac 4560
agggtgaaga gctggatatc aaagccagat ctctagactg caatctccaa tagaaggaaa 4620
atatttctag aactgtctct ctgtccagga gaaggaattc cagcacactg gcggccgta 4680
ctagtggatc cgagct 4696

```

<210> 2 SEQ ID NO: 2

<211> 2718

<212> DNA

<213> Homo sapiens

<400> 2

```

ggtaccttgc tcttggcagt gacgtgaat gaatggcaca gctcagcccc tgaagcctgt 60
gtgcagagat tgagggattg tgatggagta gttcattcat gctcatgtta aggggggtgc 120
taatagcaga ctagtgtctc tgcgattatt aatatctagg tctgggacag attgtgatgg 180
cttcttttcc agttgccacc tcagcagaaa gggaaataga aaaccctaac ttgtaaagtt 240
agacaattag actgtaaagt ttgtatatgt gacaacttca gatacaaaga cacacactta 300

```

```

cccttgacgg ggcttaagag gágagtgtca aacataatac caaagtgaaa gaagatagct 360
cttcatctac aaattatttt taaacacatt taccagggtta aacaataact aatttttcgg 420
aagagaagag taccctaaagt caaatgccct aagacgaaga gatgcttatg gcattttttt 480
ttaaataaag aaaatgcaaa gttagagtgg ttctgaagga acctaggatg aataaggtag 540
agacatgatt attctaattg tgcagacagg attgagagag aaggggggag gggagagatg 600
gagaaaaggca tggatggaag atgacgtttg gattcagatt ttggaaagga gagttaaagga 660
aggaggttaag cagagattta ttttttaaat tttattaatg tgttttcccc tctttttctt 720
gttatttttc tcatctgtct gttcatactt ggatattttg tccaataaac tatcttctaa 780
ggactctgaa aatgcactga atatttttgg aggggtttact ggggtgccag acgccacttt 840
aggagtttta catatcctct ccatttcatt tagttctctt agcàcagaga agtgggagaa 900
gatagtccca ttttacagggt gggatgaaga gagagatgga ggaatttgcc ccagggttact 960
cagctagaag gtggtgaaga actcaagcct tcggatatca gcgcctggca tttactacc 1020
aatcggtcct gctgggactc cggctcctct ggcaccatcc ccgggaccta ctacagagat 1080
ttgcacgtgg ccggtcgcgt tccatcgtct aacaaggctc agcacagcge aaatccgaag 1140
atcgtctacc ccggggaaaa agagagtctg ttttaatttc ctgtggccct ccaagttagt 1200
tcttttgggt tccattgcct agacgaggaa agtgaggctt tgcctgctct gcgctcacag 1260
ggtcggcaag tagtgggacc ctaggttcct gcagtattcc agagataatc aaagctgcac 1320
aggtctcgtc atttttatgc aaaggcgtcc ggaaggctcg aactctccct tgcacaagcc 1380
catctgtctc tgtgcgcgc ccccgggaca cgggaagcagg cggcgagcag cgccgagtgg 1440
gtggagaacc gtccccgcgc actcaccctc cggccaactc tccgcgcctt ctacagccggc 1500
acccacgagg ccgacctctc tcggcctaaa aaaaaaaaaa aaaaatcccg gcctcccctg 1560
caccgcgcc gccgcacca gggagctgca ttaatatata tctcgtgaa taattgaag 1620
ccagagattt attcgagctt cggcggggga gggagcgcag ctgggcccgc tttaggctg 1680
accacccgcg tgtttcagcc gctcgactcc gctggacctg ggacccccag acgtgggagg 1740
atggggtggg tgtgcctgcc tgtgagtttg ggggtgagtg tgagctgaag cgggtgctcc 1800
ggggagttag gaggagcgc caggggctgc tccagggagg cggagacgga ggggcatccc 1860
gggtctccgc gcggtcgcct gcgcttacc ccgcacgggg tgacctgggg ccacgcgggc 1920
ttcaggggaa acaatagcta ctcccttagat cctgggctcc tgccaccggc tgcccaagcc 1980
ttcccggacg agcggcgggg cctcttttct tatttggcta atttatggcg agaggctggg 2040
ggaaaggatg gcagaggagg gaccgcgact gaaaatgggg gcggggggcg gcggttaaag 2100
gagttgcccg aggcggcggc gcgggtgatg tcagctctcg acgaaaatag agagggatcg 2160
cctgcaaatc ccagctccg gcggggctaa accttgcaat ccctccctgg ccggcgccga 2220
gccagagcgc agcggcctcc accgcctccc caggcgcgca cacaccgcga cagcgcacg 2280
cacgctcacc gtcctctgcc accactctct gctcccgcca ctgcgcgcgc ccgcgagccc 2340
cgacgcaaa agcagggtggc agcggctgca ggggcgcatc gccggcgtgc gccctcctgc 2400
agccctgggc gcatcgctct ctcggggaag ccaccctcgg agcccccgga gctccccgcc 2460
aagcgccatc cccgcgggag gaggggagcg cgggtcgcgc gccgtggaga gccgggagcg 2520
ggattagcgc ccgaggagc ctctgcccgc cgttgaggcg ctaaagggct taccgggag 2580
gcgggtggaa gggcgggcag aggtcctct taaataccgc tcccgccgc acttcgcgct 2640
caccggcg tccgctttct ccctcgccca cagctgccgg atagtgtga agaggagggg 2700
gcgttcccc aaccatgg 2718

```

<210> 3 SEQ ID NO: 3

<211> 2454

<212> DNA

<213> Homo sapiens

<400> 3

```

ggtaccttgc tcttggcagt gagcgtgaat gaatggcaca gctcagcccc tgaagcctgt 60
gtgcagagat tgagggatg tgatggagta gttcattcat gctcatgtta aggggggtgc 120
taatagcaga ctagtgtcc tgcgattatt aatatctagg tctgggacag atttgtatgg 180
cttcttttcc agttgccacc tcagcagaaa gggaaataga aaaccctaac ttgtaaagt 240
agacaattag actgtaaagt ttgtatatgt gacaacttca gatacaaaaga cacacactta 300
cccttgacgg ggcttaagag gágagtgtca aacataatac caaagtgaaa gaagatagct 360
cttcatctac aaattatttt taaacacatt taccagggtta aacaataact aatttttcgg 420
aagagaagag taccctaaagt caaatgccct aagacgaaga gatgcttatg gcattttttt 480
ttaaataaag aaaatgcaaa gttagagtgg ttctgaagga acctaggatg aataaggtag 540

```

```

agacatgatt attctaattg tgcagacagg attgagagag aagggggggag gggagagatg 600
gagaaaggca tggatggaag atgacgtttg gattcagatt ttggaaagga gagtaaagga 660
aggaggttaag cagagattta ttttttaaat tttattaatg tgttttcccc tctttttctt 720
gttatttttc tcatctgtct gttcatactt ggatattttg tccaataaac tatcttctaa 780
ggactctgaa aatgcactga atatttttgg agggtttact ggggtgccag acgccacttt 840
aggagtttta catatcctct ccatttcatt tagttctctt agcacagaga agtgggagaa 900
gatagtccca ttttacaggt gggatgaaga gagagatgga ggaatttgcc ccaggttact 960
cagctagaag gtggtgaaga actcaagcct tcggatatca gcgcctggca tttaactacc 1020
aatcggctct gctgggactc cggctcctct ggcaccatcc ccgggaccta ctcagagagt 1080
ttgcacgtgg ccggtcgctt tccatcgtct aacaaggctc agcacagcgc aaatccgaag 1140
atcgtctacc ccggggaaaa agagagctctg ttaattctc ctgtggccct ccaagtgaag 1200
tcttttgggt tccattgcct agacgaggaa agtgaggctt tgcttgcctt gcgctcacag 1260
ggtcgggcaag tagtgggacc ctagggtcct gcagtattcc agagataatc aaagctgcac 1320
aggctcgtct atttttatgc aaaggcgtcc ggaaggctcg aactctccct tgcacaagcc 1380
catctgtctc tgtgcgcgcg ccccgggaca cggaaagcag cggcgagcag cgcagagtg 1440
gtggagaacc gtcccccgcc actcaccctt cggccaactc tccgcgcctt ctcagccggc 1500
accacagagg ccgacctctc tcggcctaaa aaaaaaaaaa aaaaatcccg gcctccccctg 1560
caccceggccc gccgccccca gggagctgca ttaattataa tctcgtgaa taattgaagg 1620
ccagagattt attcagactt cggcggggga gggagcgag ctgggcccgcg tttaggctgc 1680
accacccgcy tgtttcagcc gctcgactcc gctggacctg ggacccccag acgtgggagg 1740
atgggggtgg tgtgcctgcc tgtgagtttg ggggtgagtg tgagctgaag cgggtgctcc 1800
ggggagtgag gaggagcgcg caggggctgc tccagggagg cggagacgga ggggcatccc 1860
gggtctccgc gcggtcgctt gcgcttcacc ccgcacgggg tgacctgggg ccacgcgggc 1920
ttcaggggaa acaatagcta ctcccttagat cctgggctcc tgccaccggc tgcccaagcc 1980
ttcccgagc agcggcgggg cctcttttct tatttgcta atttatggcg agaggtggg 2040
ggaagggatg gcagaggagg gaccgcgact gaaaatgggg gcggggggcg gcggttaaag 2100
gagttgccc aggcggcgcc gcgggtgatg tcagctctcg acgaaaatag agagggatcg 2160
cctgcaaat cccagctccg gcggggctaa accttgcaat cctccctgg ccggcgccga 2220
gccagagcgc agcggcctcc accgcctccc caggcgcgca cacaccgca caccgcacg 2280
cacgtcacc gtctctgcc accactctct gctcccgcca ctgcgcgcg ccgcgagccc 2340
cgcagcaaag cacaggtggc agcggctgca ggggcgcac gccggcgtgc gccctcctgc 2400
agccctgggc gcatcgctct ctgggggaag ccacctcg agcccccgga gctc 2454

```

<210> 4 SEQ ID NO: 4

<211> 861

<212> DNA

<213> Homo sapiens

<400> 4

```

ccccgggtctc cgcgcggtcg cctgcgcttc accccgcacg gggtagacctg gggccacgcg 60
ggcttcagg gaaacaatag ctactcctta gatcctgggc tctgcccacc ggctgcccac 120
gccttccccg acgagcggcg gggcctcttt tcttatttgg ctaatttatg gcgagaggct 180
gggggaagg atggcagagg agggaccgcg actgaaaatg ggggcggggg gcggcggtta 240
aaggagttgc ccgaggcgcc ggcgcgggtg atgtcagctc tcgacgaaaa tagagaggga 300
tcgctgcaa atccccagct ccggcggggc taaaccttgc aatccctccc tggccggcgc 360
cgagccagag cgcagcggcc tccaccgcct cccagggcgc gcacacaccc gcacacgcgc 420
acgcacgctc accgtcctct gccaccactc tctgctcccg ccactcgccg cgcgcgcgag 480
ccccgcagca aagtcacaggt ggcagcggtt gcaggggcgc atcgccggcg tgcgcccctc 540
tgcaagccct ggcgcatcgc tctctcgggg aagccacctc cggagcccc ggagctcccc 600
gccaagcgc atccccgcg gcggagggga gcgcgggtcg cgcgcccgtg agagccggga 660
cgcgagttag cgcggcgagg agcctcctgc gccggttag gcgctaaagg gcttaccctc 720
gaggcggttg gaaggcgggg cagaggtctc tcttaaatac cgctcccggc cgcacttcgc 780
gctcaccctg gcgtccgctt tctccctcgc ccacagctgc cggatagtgc tgaagaggag 840
ggggcggttc ccagaccatg g

```